***Curriculum Vitae***

# Cynthia Louise Sagers

Arizona State University

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## Academic Appointments

2018-present Professor, Department of Integrative Sciences and Arts, Arizona State University, Tempe, Arizona

2018-2020 Vice President of Research, Arizona State University, Tempe, Arizona

2015-2018 Vice President of Research, Oregon State University, Corvallis, Oregon

2015-2018 Professor, Department of Integrative Biology, Oregon State University, Corvallis, Oregon

2012-2015 Associate Vice Provost for Research and Economic Development, University of Arkansas, Fayetteville, Arkansas

2012-2015 Professor, Biological Sciences, University of Arkansas, Fayetteville, Arkansas

2011-2014 Research Collaborator, Smithsonian Institution, Washington, D.C.

2010-2012 Program Officer, National Science Foundation, Office of International Science and Engineering/ Division of Environmental Biology, Arlington, Virginia

2010-2012 Graduate Faculty, Department of Entomology, University of Arkansas, Fayetteville, Arkansas

2009-2011 Graduate Faculty, Department of Biology, University of Arkansas, Little Rock, Arkansas

2005-2007 Senior Research Associate, National Research Council, U.S. Environmental Protection Agency, Corvallis, Oregon

2000-2011 Associate Professor, University of Arkansas, Fayetteville, Arkansas

1994-1999 Assistant Professor, University of Arkansas, Fayetteville, Arkansas

1993 Postdoctoral Fellow, Department of Integrative Biology, University of California, Berkeley, Berkeley, California

1991 National Science Foundation Pre-doctoral Fellow

1990 Smithsonian Tropical Research Institute Pre-doctoral Fellow

1989 Fulbright Fellow, Panama

1984-1986 Lab Manager, Department of Psychology, University of Tennessee, Knoxville, Tennessee, Burghardt Lab

## Professional Preparation

1993 Ph.D., University of Utah, Salt Lake City, Utah

"Evolution of Anti-herbivore Defense in a Neotropical Shrub" (Phyllis Coley, adviser)

1987 Organization for Tropical Studies, Costa Rica (Elizabeth Braker, coordinator)

1984 B.A. (Biology), University of Iowa, Iowa City, Iowa (Henry Howe, adviser)

1982 B.A. (General Science), University of Iowa, Iowa City, Iowa

## Board Positions

2018-2020 Association of Public and Land-grant Universities, Council on Research (APLU CoR), Executive Committee Member

2019-2020 NSF Center for Bright Beams, Cornell University, Senior Research Council

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| 2016-2018 | CleanTech Alliance (Seattle, Washington), board member |
| 2015-2018 | Oregon State University, Board of Trustees, Academic Strategies Committee, ex officio committee member |
| 2015-2018 | Oregon Nanoscience and Microtechnologies Institute (ONAMI), Oregon Innovation Council and Business Oregon, board member |
| 2015-2018 | Oregon Built Environment and Sustainable Technologies Center, Inc. (Oregon BEST), Oregon Innovation Council and Business Oregon, board member |
| 2015-2018 | Oregon Translational Research and Development Institute (OTRADI) |

2018 Oregon Innovation Council and Business Oregon, board member

2015-2018 Regional Accelerator and Innovation Network (RAIN), Oregon’s Regional Solutions Network, board member

2015-2018 Pan Pacific UAS Test Range Complex (PPUTRC), board member

2015-2017 SOAR Oregon, Oregon Innovation Council and Business Oregon, board member

2015 Organization for Tropical Studies, interim board chair

2007-2009 Arkansas Governor's Global Warming Commission, commission member

**Teaching Experience**

1993-2015 University of Arkansas

General Biology (undergraduate)

Plant Biology (undergraduate)

Invertebrate Zoology (undergraduate)

Honors Colloquium (undergraduate)

Field Ecology (graduate/undergraduate)

Evolutionary Biology (undergraduate)

Plant Population Ecology (graduate/undergraduate)

Graduate Seminar in Ecology and Evolutionary Biology

2013 Visiting Faculty, OTS Native American and Pacific Islander Research Experience (NSF NAPIRE), Las Cruces, Costa Rica

2009-2013 Visiting Faculty on Organization for Tropical Studies (OTS) graduate course, Costa Rica

2009 Visiting Faculty on OTS undergraduate semester abroad, Costa Rica

2004 Visiting Faculty on OTS graduate course (Spanish language), Costa Rica

1999-2001 Visiting Faculty on OTS graduate course, Costa Rica

2001 Visiting Faculty on OTS undergraduate semester abroad, Costa Rica

1986-1993 Teaching Fellow, University of Utah

Ecology (undergraduate)

Evolutionary Biology (undergraduate)

General Entomology (undergraduate)

Evolutionary Field Biology (Galapagos, undergraduate, k-12 teachers)

1985 Teaching Assistant, Knoxville College

Vertebrate Anatomy (undergraduate)

## Awards and Recognitions

2019 Distinguished Alumna, University of Utah

2016 Member, Phi Kappa Phi Honor Society

2005, 2008 Outstanding Teacher Recognition, Associated Student Government/Student Alumni Board, University of Arkansas

2004 Baum Teaching Award, Teaching Academy, University of Arkansas

2003 Honorary Member, Golden Key Society

2000-2004 Outstanding Mentor, University of Arkansas

1999 University’s Best Teacher Award, Associated Student Government and the Student Alumni Board

1999 Baum Teaching Award, Teaching Academy, University of Arkansas

1997 Charles and Nadine Baum Teaching Grant, Arkansas Teaching Academy

1997 Travel Award, Teaching and Faculty Support Center, University of Arkansas

1996 Travel Award, Teaching and Faculty Support Center, University of Arkansas

1996 Outstanding Teacher Recognition, Associated Student Government/Student Alumni Board

**Undergraduates Mentored in Research**

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| Carla Brown\* | Doug Eddy |
| Tomomi Igarashi | Stephen Ironside+ |
| Christen Johnson | Dana Kinney+ |
| Grace Kostel+ | Jenneca McCarter\*+ |
| Allison Mencer | Jessica Minard |
| Brett Murdoch+ | Natalie Nelson |
| Katie Phillips | Ruth Plymale+ |
| Cheryl Silveri+ | Jim Sloan+ |
| Krystina Walker Stephanie Wise | Lauren Williams+ |

\*underrepresented minority, +pursued graduate work in biology

*Additional service to 80 undergraduates as committee member or honors council representative*

## Graduate Students and Postdoctoral Fellows

Dr. Jon Lyon, Post-doctoral fellow (1996) *Inventory and characterization of the Current and Jacks Fork Rivers, Missouri*

Current Position: Associate Professor, Merrimack College, North Andover, MA

Janene Shupe Lichtenberg (MS, 1999) *Trophic interactions in an Ozark forest ecosystem.*  Current Position: Research Scientist, USGS National Wetlands Research Center

Steve Trimble (MS, 2002) *Stable isotopes reveal variable host use in a neotropical ant-plant interaction.*

Current Position: Botanist, USFS

Edith Hardcastle (PhD, 2003) Ecology *and conservation genetics of* Delphinium newtonianum *(Moore’s Delphinium), Ranunculaceae, a rare endemic of the Interior Highlands* (coadvised with J Gentry)

Current Position: Associate Professor, Southern Indiana University, Evansville, IN

Victor Carmona Galindo (PhD, 2005) *Conditionality in obligate ant-plant mutualisms from a neotropical dry forest.*

Current Position: Assistant Professor, Loyola Marymount University, Los Angeles, CA

Dr. Jason Londo, Post-doctoral fellow (2010 - 2012). *Ecological Impacts from the interactions of climate change, land use change and invasive species: a joint research solicitation:*

*Global change and the cryptic invasion by transgenes of native and weedy species.*  Current Position: USDA Research Geneticist, Geneva, NY.

Meredith Schafer (MS, 2012) *Fitness of transgenic crop-weed hybrids: the influence of selective pollination.*

Paola Barriga (PhD, 2012) *Community structure and host specialization in* Cecropia-Azteca *associations*.

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| **Service on Graduate Student Committees** |  |
| Aydin Akbudak (PhD) | Karen Arbuckle (MS) |
| Terry Booth (PhD) | Paul Burns (PhD) |
| Amy Clifton (PhD) | Jason Desormeux (MS) |
| Amanda Dumas (PhD) | Travis Edwards (MS) |
| Leopoldo Estorninos (PhD) | Melissa Fierke (PhD) |
| Amy Freese (PhD) | Elena Garcia (PhD) |
| Julie Havens (PhD) | Nick Haertle (MS) |
| Jennifer Herner-Thogmartin (MS) | Heather Hubbard (MS) |
| Tanya Hanano (MS) | Jackson Jennings (MS) |
| Danielle Keeler (MS) | Dana Kinney (MS) |
| Sophia Kinsey (MS) | Aditi Lee (PhD)\* |
| Travis Marsico (MS) | Carey Minteer (MS) |
| Donna Moore (PhD) | Laura Nagy (MS) |
| Brian Newby (MS) | Scott Nigemann (MS) |
| Sara Nunn (MS) | Cassia de Oliveira (PhD) |
| Lowell Overton (PhD) | Reema Persad (MS) |
| Melissa Pilgrim (PhD) | Adrienne Pilmanis (PhD) |
| Mike Powers (MS) | John Prather (PhD) |
| Scott Quinton (MS) | Robin Reese (MS) |
| Steve Rhoton (MS) | Carlos Rojas (PhD) |
| Katie Rose (MS) | Mandy Scott (MS) |
| Kris Sillett (MS) | Aaron Spann (MS) |
| Julie Spears (MS) | Dan Stephen (MS) |
| Melissa Stennett (MS) | Robin Verble (PhD)+ |
| Vanessa Ware (MS) | Lusike Wasilwa (PhD) |
| Elizabeth Weiss (PhD) | David X Williams (PhD) |
| Marissa Williams (MS) | Harleigh Wilmott (PhD) |
| Katie Winsett (PhD) | Byron Winston (MS, PhD) |

## Grants (PI on all, except where noted)

## 2018-2021 Arizona Department of Health Services ($242,000)

## Arizona Biomedical Research Center - Educational Initiative

## 2012-2014 National Science Foundation ($67,805)

CNIC: Planning visits to develop U.S. – Costa Rica – Asia collaborative research and education initiatives in biodiversity and sustainability in the tropics. (co-PI)

## 2008-2013 Environmental Protection Agency/United States Department of Agriculture ($520,000)

"Global change and the cryptic invasion by transgenes of native and weedy species"

### 2008 National Science Foundation, Office ($20,000)

"Collaborative Research – U.S.-Latin America planning visits to establish international research and education partnerships in coevolution of the *Cecropia*-symbiont model system"

### 2008 National Science Foundation ($267,950)

"REU SITE: Exploring ecosystem services assessment and sustainability through a tribal education research program" (collaborator, M Matlock and K Smith PIs,)

## 2005-2007 National Research Council ($125,000)

"National Academies Research Associateship: Biological interactions in populations of engineered canola" (Fellow, L Watrud PI)

## 2003-2004 American Association for the Advancement of Science/National Science Foundation ($5,000)

"Women’s International Science Collaboration (WISC): Cooperation and coevolution: a comparative study of mutualism in the genus *Cecropia*"

## 2000-2004 United States Department of Agriculture ($189,000)

"Ecological risk assessment of the release of transgenic rice in southeastern Arkansas"

1998 Arkansas Science and Technology Authority ($56,000)

"A phylogenetic analysis of the evolution of plant defense"

## 1995-1997 National Park Service ($81,000)

"Inventory and characterization of the riparian zone of the Current and Jacks Fork Rivers, Missouri"

1994-1996 National Park Service ($36,000)

"Inventory and characterization of the riparian zone of the Buffalo National River"

1995-1996 National Park Service ($5,000)

"Survey of threatened plant species of the Buffalo National River"

## 1995-1996 National Park Service ($5,000)

"Inventory of selected springs and seeps within the Buffalo National River"

*Grants in Support of Undergraduate Research*

### 2010 Environmental Protection Agency ($40,000)

"Physiological status of feral *Brassica napus* populations as demonstrated by stable isotope analysis" (C Sagers and B Murdoch, Co-PIs)

### 2009 Arkansas Department of Higher Education ($2,400)

"Micro-geographic variation on fitness in the *Cecropia-Azteca* association as shown through herbivory levels, light environment and stable isotope analysis" (C Sagers and Stephen Ironside, Co-PIs)

### 2007 Arkansas Department of Higher Education ($2,400)

"Environmental impacts on transgene flow as shown in canola (*Brassica* *napus*) and weedy *Brassica rapa"* (C. Sagers and K Walker, Co-PIs)

### 2004 Arkansas Department of Higher Education ($2,400)

"Developmental shifts in nitrogen acquisition in *Hottonia inflata*; evidence from stable isotopes" (C Sagers and L Bell, Co-PIs)

2003 Arkansas Department of Higher Education ($2,400)

"Vegetation analysis of Buffalo Gap National Grassland" (C Sagers and G Kostel, Co-PIs)

2001 Arkansas Department of Higher Education ($2,400)

"Inheritance and stability of transgenic characters" (C Sagers and H. Cook, Co-PIs)

1998 Arkansas Department of Higher Education ($2,400)

"Physiological benefits of an ant-plant mutualism‖ (C Sagers and S Ginger, Co-PIs).

## Publications

Sagers, C.L., J.P. Londo, N. Bautista, E.H. Lee, L.S. Watrud, L.S. and G. King.G. 2015. Benefits of transgenic insect resistance in *Brassica* hybrids under selection. Agronomy 5: 21-34.

Barriga, P.A., D.F. Dormann, E.E. Gbur and Sagers. 2015. Community structure and ecological specialization in plant-ant interactions. Journal of Tropical Ecology 31: 325-334.

Londo J.P., J. McKinney, M. Schwartz, M. Bollman, C. Sagers, L. Watrud. 2015. Sub-lethal glyphosate exposure alters flowering phenology and causes transient male-sterility in *Brassica* spp. outcrossing potential in *Brassica* spp. by altering flowering phenology and causing transient male-sterility. BMC Plant Biology 14:70 https://doi.org/10.1186/1471-2229-14-70

Barriga, P.A., J.V. Sloan, S.D. Porter and C.L. Sagers. 2013. Stable isotope enrichment in laboratory ant colonies: effects of colony age, metamorphosis, diet and fat storage. Entomologia Experimentalis et Applicata 149:265-272.

Schafer, M.G., A.X. Ross, J.P. Londo, C.A. Burdick, E.H. Lee, S.E. Travers, P.K. Van de Water, C.L. Sagers. 2011. The establishment of genetically engineered canola populations in the U.S. PLoS ONE 6(10): e25736. doi:10.1371/journal.pone.0023736.

Londo, J.P., M.A. Bollman, C.L. Sagers, E.H. Lee and L. S. Watrud. 2011. Glyphosate-drift but not herbivory alters the rate of transgene flow from single and stacked trait transgenic canola (*Brassica napus*) to nontransgenic *B. napus* and *B. rapa*. New Phytologist 191:840-849.

Londo, J.P., B.A. Bollman, C.L. Sagers, E.H. Lee and L.S. Watrud. 2011. Changes in fitness associated traits due to the stacking of transgenic glyphosate resistance and insect resistance in *Brassica napus* L. Heredity 2011:1-10.

Sagers, C.L. 2011. Nutrient acquisition and concentration by ant symbionts: the incidence and importance of biological interactions on plant nutrition. *In* J. Polanco and C. Todd (eds) Environmental Aspects of Nitrogen Metabolism in Plants. Wiley-Blackwell Publishers, Indianapolis.

Londo, J.P., N.S. Bautista, C.L. Sagers, E. H. Lee and L.S. Watrud. 2010. Glyphosate drift promotes changes in fitness and transgene gene flow changes in canola (*Brassica napus* L.) hybrids. Annals of Botany 106:957-965.

Bautista, N. S., C.L. Sagers, E. Henry Lee and L.S. Watrud. 2010. Flowering times in genetically modified *Brassica* hybrids in the absence of selection. Canadian Journal of Plant Science 90:

185-187.

McNett, K., J. Longino, P. Barriga, O. Vargas, K. Phillips and C.L. Sagers. 2010. Stable isotope investigation of a cryptic ant-plant association: *Myrmelachista flavocotea.* (Hymenoptera: Formicidae) and *Ocotea* spp. (Lauraceae). Insectes Sociaux 57:67-72.

Sagers, C.L. and F. Goggin. 2007. Isotopic enrichment in a phloem-feeding insect: effects of nutrient and water availability. Oecologia 151:464-472.

Sagers, C.L. and P.D. Coley. 2007. Beneficios y costos de defense en un arbusto del neotrópico. *In* N. Gomez and EG Leigh (eds) Ecología y Evolución en los Trópicos, Smithsonian Institution Press, Washington, D.C.

Trimble, S.T. and C.L. Sagers. 2004. Differential patterns of host use in two highly specialized ant plant associations: evidence from stable isotopes. Oecologia 138:74-82.

Lyon, J. and C.L. Sagers. 2003. Correspondence analysis of functional groups in a riparian landscape. Plant Ecology 164:173-181.

Sagers, C.L. 2003. Feral cabbages, mutant Monarchs and monster sewer sludge: the uncertain ecologies of genetically modified organisms. A review of: *Genetically Engineered Organisms: Assessing Environmental and Human Health Affects*. Ecology 84:809-810*.*

Sagers, C.L. 2002. Ecological risk assessment of the release of transgenic rice in southeastern Arkansas *In* A. Snow (ed.) Ecological and Agronomic Consequences of Gene Flow from Transgenic Crops to Wild Relatives, Ohio State University, Columbus, Ohio.

Sagers, C.L., S. Ginger and R.D. Evans. 2000. Carbon and nitrogen isotopes trace nutrient exchange in an ant-plant mutualism. Oecologia 123:582-586.

Sagers, C.L. 2000. Suiting up to sit down: a step by step guide to writing a research proposal. A review of: *Writing Successful Science Proposals*. Ecology 81:3549-3550.

Lyon, J. and C.L. Sagers. 1998. Structure of herbaceous plant assemblages in a forested landscape. Plant Ecology 138:1-16.

Sagers, C.L. and J. Lyon. 1997. Gradient analysis in a riparian landscape: contrasts among forest layers. Forest Ecology and Management 96:13-26.

Sagers, C.L. and J. Lyon. 1997. Inventory and characterization of the riparian zone of the Buffalo National River. Final Project Report to the National Park Service.

Sagers, C.L. 1996. Mechanisms of asexuality in neotropical understory shrubs. *In* M.D. Swaine (ed) The Ecology of Tropical Forest Tree Seedlings. UNESCO, Parthenon Publishing Group, New York.

Sagers, C.L. and P.D. Coley. 1995. Benefits and costs of defense in a neotropical shrub. Ecology 76:1835-1843.

Sagers, C.L. 1993. *The Evolution of Asexual Reproduction in Plants*. Plant Science Bulletin 39:25-26.

Sagers, C.L. 1993. Reproduction in neotropical shrubs: the occurrence and some mechanisms of asexuality. Ecology 74:615-618.

Sagers, C.L. 1992. Manipulating host plant quality: herbivores keep leaves in the dark. Functional Ecology 6:741-743.

**Papers Presented at Professional Meetings**

Barriga, P.A. and C.L. Sagers 2012. Community structure and ecological specialization in plant-ant interactions. Annual Meeting of the Ecological Society of America, Portland, Oregon.

Londo, J.P., B.A. Bollman, C.L. Sagers, E.H. Lee and L. S. Watrud. 2011. Hybridization, genetic hitchhiking and the ecology of transgenes in feral *Brassica*. Annual Meeting of the Ecological Society of America, Austin, Texas.

Schafer, M., A.X. Ross, J.P. London, S.E. Travers, P.K. Van de Water and C.L. Sagers. 2011. Occurrence of feral crop species in weedy environments. Annual Meeting of the Ecological Society of America, Austin, Texas.

Barriga, P.A., S.V. Sloan, S.D. Porter and C.L. Sagers. 2010. Stable isotope enrichment as a function of metamorphosis and diet in laboratory colonies of the invasive fire ant, *Solenoids invite*. Annual Meeting of Sigma Xi Society, Durham, North Carolina.

Schafer, M.G., A.X. Ross, J.P. Londo, C.A. Burdick, E.H. Lee, S.E. Travers, P. Van de Water and C.L. Sagers. 2010. Evidence for the establishment and persistence of genetically modified canola populations in the U.S. Annual meeting of the Ecological Society of America, Pittsburgh, Pennsylvania.

Travers, S, P. Van de Water, J. Londo and C. Sagers. 2010. Implications of climate change and flowering time shifts for native-native and crop-native pollen flow. Society for the Study of Evolution, Portland, Oregon.

Sagers, C.L., L. Watrud, J. Londo and G. King. 2009. Migration and persistence of transgenes in nature:

a mesocosm simulation with *Brassica napus*. Annual meeting of the Ecological Society of America, Albuquerque, New Mexico.

Barriga, P., S. Trimble and C.L. Sagers. 2009. Analyses of nitrogen concentration and 13C as an integrated measure of mutualists’ benefits. Annual meeting of the Ecological Society of America. Albuquerque, New Mexico.

Londo, J., M. Bollman, C.L. Sagers and L.S. Watrud. 2009. Fitness of Stacked Transgenic *Brassica napus* L. and Gene Flow Dynamics in Constructed Plant Communities. American Geneticists Association, Providence, Rhode Island.

Londo, J., M. Bollman, C.L. Sagers and L.S. Watrud. 2008. Evaluating the potential ecological effects of stacked transgenes in *Brassica napus*. Agricultural weeds—Bridging the gap between evolutionary ecology and crop science. Athens, Georgia.

McNuttt, K.M., J. Longino, P. Barriga, O. Vargas, K. Phillips and C.L. Sagers. 2008. Evidence for mutualism in a cryptic ant-plant association: *Myrmelachista flavocotea* (Hymenoptera) and *Ocotea* spp. (Lauraceae). Association for Tropical Biology and Conservation, Paramaribo, Suriname.

Londo, J.P., M. Bollman, C.L. Sagers and L.S. Watrud. 2008. Evaluating the potential ecological effects of transgene escape and persistence in constructed plant communities. Botanical Society of America, Vancouver, British Colombia.

Sagers, C.L., N.S. Bautista, P. Barriga, E.H. Lee, L.S. Watrud. 2007. Biological interactions in engineered populations of canola. Botany 2007. Botanical Society of America, Chicago, Illinois.

Bautista, N. S., C.L. Sagers and L.S, Watrud. 2006. Maternal effects in advanced hybrids of genetically modified and on-genetically modified *Brassica* species. American Society of Plant Biologists, Boston, Massachusetts.

Sagers, C.L. and F. Goggin. 2006. Isotopic enrichment in a phloem-feeding insect: effects of nutrient and water availability. Annual meetings of the Ecological Society of America, Memphis, Tennessee.

Sagers, C.L. and H. Schrum. 2003. Introgression of transgenic rice (*Oryza sativa*) into weedy red rice: a greenhouse study. European Science Foundation: Introgression from Genetically Modified Plants into wild relatives and its consequences. Amsterdam, The Netherlands.

Sagers, C.L. and S.T. Trimble. 2002. Stable isotopes reveal conditional nature of a specialized ant-plant interaction. Annual meetings of the Society for the Study of Evolution, Urbana-Champagne,

Illinois.

Sagers, C.L. 2000. Stable isotopes trace nutrient exchange in an ant-plant symbiosis. Stable Isotopes in Ecology, Braunschweig, Germany.

Sagers, C.L. and S. Ginger. 1999. Stable isotope analysis reveals hidden benefits in an ant-plant mutualism. Annual meetings of the Ecological Society of America, Spokane, Washington.

Sagers, C.L., D. Kinney and J. Rowe. 1998. Leaf development, resistance and herbivory of *Glycine max* grown in two light regimes. Annual meetings of the Ecological Society of America, Baltimore, Maryland.

Park, J.S. and C.L. Sagers. 1997. Plasticity in plant growth is a function of maternal environment. Annual meetings of the Ecological Society of America, Albuquerque, New Mexico.

Sagers, C.L. and R.D. Evans. 1996. *Cecropia* defenses in the absence of an *Azteca* defense: implications for optimal defense theory. Annual meetings of the Ecological Society of America, Providence, Rhode Island.

Lyon, J. and C.L. Sagers. 1996. Characterization of riparian zone vegetation and analysis of vegetation change from 1969 to 1995 within the Ozark National Scenic Riverways in Missouri, USA. Annual meetings of the Ecological Society of America, Providence, Rhode Island.

Perry, B. and C.L. Sagers. 1996. The development of plant defense in two light environments. Annual meetings of the Ecological Society of America, Providence, Rhode Island.

Lyon, J. and C.L. Sagers. 1996. Characterizing 30 years of woody vegetation change within the Ozark National Scenic Riverways, Missouri. Natural Areas Conference, Chicago, Illinois.

Sagers, C.L. 1995. Chemical and mechanical defense of a neotropical shrub: phenotypic selection in two light environments. Annual meetings of the Society for the Study of Evolution, Montreal, Quebec.

Hubbard, H. D.L. Moore, and C.L. Sagers. 1995. Effects of recreation-related disturbance on the species composition and diversity of the riparian zone of the Buffalo National River, Arkansas. Annual meetings of the Ecological Society of America, Snowbird, Utah.

Sagers, C.L. 1994. Herbivory limits productivity in light gap environments of a tropical forest. Annual meetings of the Ecological Society of America, Knoxville, Tennessee.

Sagers, C.L. 1993. Selection, genetic correlations, and phenotypic plasticity of plant defense in a tropical shrub. Annual meetings of the Ecological Society of America, Madison, Wisconsin.

Sagers, C.L. 1992. Reaction norms of plant defenses and patterns of herbivory in a neotropical forest. Annual meetings of the Ecological Society of America, Honolulu, Hawai'i.

Sagers, C.L. 1992. Plasticity of defense and fitness in a neotropical shrub. Annual meetings of the Society for the Study of Evolution, Berkeley, California.

Sagers, C.L. 1992. The occurrence and some mechanisms of vegetative propagation in a neotropical shrub. Annual meetings of the Guild of Rocky Mountain Population Biologists, Niwot Ridge, Colorado.

Sagers, C.L. 1991. Natural levels of herbivory and growth in clones of *Psychotic* *horizontals* Sw.

(Rubiaceae). Annual meetings of the Ecological Society of America, San Antonio, Texas.

Sagers, C.L. 1990. Herbivores manipulate host plant defenses. Annual meetings of the Ecological Society of America, Snowbird, Utah.

Sagers, C.L. 1990. Herbívoros manipulan las defensas de la planta hospedera. Séptimo Congreso de Ciencias. Universidad de Panamá.

## Invited Presentations at Symposia, Conferences and Workshops

2020 Association for Tropical Biology and Conservation (ATBC), Annual Meeting, *How should the Organization of Tropical Studies (OTS) contribute to the future of tropical biology?*(presenter), July 12, 2020, Cartagena, Colombia. (POSTPONED)

2020 Association for Public and Land-grant Universities, Council on Research (CoR) summer meeting. *Safe and Inclusive Research Environments: Eradicating Sexual Harassment* (session organizer), June 11, 2020 (VIRTUAL).

2020 University Industry Partnerships (UIDP) Contracting Forum 2020, *Getting to Yes: What Leading Companies and Universities are Doing to Reduce Negotiation Times* (moderator), Jan 28, 2020, Scottsdale, Arizona, USA.

2019 Association of Public and Land-grant Universities, Council on Research (CoR) summer meeting, *Sexual Harassment in Academia* (moderator), June 18, 2019, State College, Pennsylvania, USA.

2018 Association of Public and Land-grant Universities (APLU) 2018 Annual Conference, *Managing Responsible Research and Innovation Collaborations with China* (panelist) November 11, 2018, New Orleans, Louisiana, USA.

2017 Association of International Education Administrators (AIEA) 2017 Annual Conference, *Opportunities for SIO Leadership in Global Research: Building your Institution’s ”Global Research IQ”* (co-presenter), February 19, 2017. Washington, D.C., USA

2017 Association of Public & Land-Grant Universities, Council on Research (CoR) summer meeting, *Workshop for New and Future Vice Presidents/Vice Chancellors for Research* (presenter), July 28, 2017, Bozeman, Montana, USA.

2016 Association of Public & Land-Grant Universities, Council on Research (CoR) summer meeting, *Workshop for New and Future Vice Presidents/Vice Chancellors for Research* (presenter), July 31, 2016, Park City, Utah, USA.

2016 Association of Pubic and Land-Grant Universities (APLU), 2016 Annual Conference, *New Faculty Hiring Strategies to Advance Innovation* (moderator), November 14, 2016, Austin, Texas, USA.

2013 US Department of State workshop funded by NSF (USA) and Coordenação de

Aperfeiçoamento de Pessoal de Nivel Superior (CAPES –Brazil), *Building Research Partnerships Between Women Scientists and Engineers in the U.S. And Brazil* (organizer), February 12-14, Boston, Massachusetts, USA.

2012 United Nations Conference of the Parties serving as the Meeting of the Parties (COP/MOP 6) to the Cartagena Protocol on Biosafety, *Domestication, feral species and the future of plant diversity* (presenter), October 2, 2012, Hyderabad, India

2012 Scientific Conference Advancing the Understanding of Biodiversity, Sponsored by European Network of Scientists for Social Responsibility, Tara Foundation and Third World Network, *Domestication, feral species and the future of plant diversity* (presenter), September 28-29, 2012, Hyderabad, India.

2012 Third International Conference on Implications of Genetically Modified Crop Cultivation at Large Spatial Scales, *“Analysis of GM crop escape at large spatial scales,* June 14-15, 2012 (presenter), Universität Bremen, Bremen, Germany.

2012 The National Academies *Partnerships, Science, and Innovation for Sustainability Solutions* (presenter),May 16-18, 2012, Pew Conference Center, Washington, D.C.

2012 U.S. Department of State, U.S. Ambassador to Brazil, *Advancing Women in Science* (panelist) Washington, D.C.

2012 Association for Tropical Biology – Asia Chapter, *Research Priorities in Tropical Science* (presenter), March 24-27, 2012, Xishuangbanna Tropical Botanical Garden, Yunnan, China,.

2011 Ecological Society of America, *Domestication, feral species and the importance of agriculture to the future of plant diversity* (convener, presenter), Austin, Texas, USA

2011 UCSB-China Partnership in International Research and Education, PIRE-ECCI Annual Meeting and Workshop: Electron Chemistry and Catalysis at Interfaces, *NSF international programs and future PIRE competitions* (presenter) Santa Barbara, California, USA.

2010 Centro Brasileiro de Pesquisas Físicas (CBPF/MCT)/US Office of Naval Research, Workshop on Nanoscale Science, Technology and Innovation, *NSF: Catalyzing New International Research Collaborations* (presenter), Rio de Janeiro, Brazil.

2009 US EPA/USDA, The Plight of Ecosystems in a Changing Climate, *Global change and the cryptic invasion by transgenes of native and weedy species* (presenter), Seattle, Washington, USA.

2007 USDA/EPA/NSF, *Second Symposium for Agricultural Biotechnology Risk Analysis Research* (AGRA) (presenter), College Park, Maryland, USA.

2005 USDA, CREES, RiceCAP (Coordinated Agricultural Program), Marker Assisted Breeding Workshop, *Ecological risk assessment of the release of transgenic rice (*Oryza sativa*)* (presenter), Stuttgart, Arkansas, USA.

2004 USDA, APHIS, Biotechnology Regulatory Services, *Confinement of Genetically Engineered Crops During Field Testing* (participant), Riverdale, Maryland, USA.

2002 Ohio State University, Scientific Methods Workshop, Ecological and Agronomic

Consequences of Gene Flow from Transgenic Crops to Wild Relatives, *Transgene migration by crop-to-weed hybridization* (presenter), Columbus, Ohio, USA.

1997 Southwestern Association of Naturalists, Ozark Plant Communities, *Canonical correspondence analysis of riparian plant communities in the Ozarks* (presenter), Fayetteville, Arkansas, USA.

1996 Arkansas Water Resources Center, Diversity of Arkansas Water Resources Research, *Riparian plant communities of the Buffalo National River* (presenter), Fayetteville, Arkansas, USA.

1995 World Wildlife Fund Conference, The Potential Impacts of Climate Change on Tropical Forest Ecosystems (participant), San Juan, Puerto Rico.

1992 UNESCO Symposium, The Ecology of Tropical Forest Tree Seedlings, *Mechanisms of asexuality in Neotropical understory shrubs* (presenter), University of Aberdeen, Aberdeen, Scotland.

## Invited Seminars

2020 Iowa State University, Ames, Iowa

2019 Smithsonian Tropical Research Institution, Panama City, Panama

2013 University of New Orleans, Department of Biology, New Orleans, Louisiana

2013 U.S. Environmental Protection Agency, National Health and Environmental Effects Lab, Western Ecology Division, Corvallis, Oregon

2011 Oregon State University, NSF Day, Corvallis Oregon

2011 University of Arkansas, Little Rock, NSF Day, Little Rock, Arkansas

2010 George Washington University, Department of Biology, Washington, D.C.

2010 Universidad São Paulo, Department of Biology, São Paulo, Brazil

2009 Russell Senate Office Building, Capitol Hill, Washington, D.C. (congressional briefing)

2009 US National Science Foundation, Office of International Research and Engineering, Washington, D.C.

2009 North Dakota State University, Department of Biological Sciences, Fargo, North Dakota

2008 University of Arkansas – Fort Smith, Department of Biology, Fort Smith, Arkansas

2007 Southern Illinois University, Department of Plant Biology, Carbondale, Illinois

2006 Evergreen State University, Biology Department, Olympia, Washington

2005 Oregon State University, Botany Department, Corvallis, Oregon

2003 Natural History Museum, London, Department of Botany, London, UK

2003 University of Colorado, Department of Biology, Boulder, Colorado

2002 Grinnell College, Department of Biology, Grinnell, Iowa

2001 University of Costa Rica, Department of Entomology, San José, Costa Rica

2000 Boise State University, Department of Biology, Boise, Idaho

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| 1998 University of Central Arkansas, Department of Biology, Conway, Arkansas | |
| 1997 | University of Georgia, Department of Botany, Athens, Georgia |
| 1997 | University of Nevada, Reno, Department of Biology, Reno, Nevada |
| 1996 | Northeastern State University, College of Mathematics, Science and Nursing, Tahlequah, Oklahoma |
| 1995 | University of Tulsa, Department of Biology, Tulsa, Oklahoma |
| 1993 | University of Arkansas, Department of Biology, Fayetteville, Arkansas |
| 1993 | University of Tennessee, Department of Botany, Knoxville, Tennessee |
| 1993 | University of Utah, Museum of Natural History, Salt Lake City, Utah |
| 1992 | University of Vermont, Department of Botany, Burlington, Vermont |
| 1992 | Vassar College, Department of Biology, Poughkeepsie, New York |
| 1991 | Smithsonian Tropical Research Institute, Panama City, Panamá |

## Professional Society Memberships

American Association for the Advancement of Science

American Society of Naturalists

Association for Tropical Biology and Conservation

Botanical Society of America

Ecological Society of America

Organization for Tropical Studies

Society for the Study of Evolution

**Service Organization Memberships**

ARCS – Advancing Science in America  
Sigma Xi

**Service to the State**

2015-2018 Business Oregon, High Impact Opportunities Committee, committee member

## University Service

### Arizona State University

ASU NSF ADVANCE program, internal advisory committee (2018-present)

ASU Faculty Women’s Association, Executive Committee, member (2018-present)

ASU BioDesign, Internal Advisory Committee, member (2018-)

ASU NASA Psyche Advisory Board, member (2018-present)

### University of Central Florida

Institutional Review Committee (Research), committee member (2020-2021)

### Oregon State University

President’s Cabinet (2015-2018)

President’s Board Work Group (2015-2018)

University Tenure and Promotion Committee (2015-2018)

President’s Executive Marketing Cabinet (2016-2018)

University Executive Compliance Committee (2016-2018)

University Risk Committee (2017-2018)

University Master Plan Working Group (2017-2018)

University Accreditation Committee (2018)

Provost’s Infrastructure Working Group (2016-2018)

Institutional Animal Care and Use Committee, Institutional Official (205-2018)

Institutional Review Board, Institutional Official (2015-2018)

NSF ADVANCE Internal Advisory Committee, member (2015-2018)

### University of Arkansas

Chancellor’s Sustainability Council, Fulbright College representative (2007-2009)

Native American Student Association (NASA) Symposium Committee (2008-2009)

Vice Chancellor's Task Force on Inclusive Excellence (2006-2009)

University All Judiciary Board (2005-2009)

NCAA Certification Self-study, Academic Integrity sub-committee (2002)

NCAA Certification Self-study, Gender Equity sub-committee (1995) Environmental Task Force (1994-1995)

Fulbright College Honor's Council, Chair (2007-2009)

Fulbright College Honor's Council (1999-2002, 2006-2009) Fulbright College Personnel Committee (2001-2003)

Fulbright College Scholarship Committee (2000-2002)

Honors College, Fellowship reviewer (2008-2015)

Biology Club, faculty sponsor (2005-2010)

Biology Facilities committee (2008-2010)

Biology Ecologist Search Committee (2007)

Biology Graduate Studies Committee, Chair (2006-2008)

Biology Graduate Studies Committee (1997-1999,2004-2005)

Biology Undergraduate Studies Committee (2004-2008)

Biology Seminar Committee (2004)

Biology Ecologist Search Committee, Chair (2004) Biology Greenhouse Supervisor (1997-2002)

Biology Greenhouse Committee (1997-2002) Biology Honors and Awards Committee (1997-2002) Biology P&T *Ad hoc* Appeals Committee (2) (2001)

Biology Wildlife Biologist Search Committee (2000)

Biology *Ad hoc* Committee: Revising Principles of Biology (1999-2000)

Biology *Ad hoc* Committee on Biology Undergraduate Advising (1997-1999)

Biology Curriculum Committee (1994-1997)

Biology Library Liaison (1994-1997)

Biology Geneticist Search Committee (1996)

## National Service

US State Department, U.S. Ambassador to Brazil, Advancing Women in Science Working Group (2012)

Board of Directors of Organization for Tropical Studies, interim Chair (2015)

Board of Directors of Organization for Tropical Studies, Secretary (2008-2015)

Board of Directors of Organization for Tropical Studies, At-Large Board Member (2003-2006)

Organization for Tropical Studies, Governance Reorganization Task Force (2007)

Organization for Tropical Studies Membership Committee, Chair (2007-2015)

Organization for Tropical Studies, Globalization Task Force (2006-2008)

Organization for Tropical Studies, Strategic Planning, Finances sub-committee (2005-2006)

Organization for Tropical Studies Assembly of Delegates (2000-2015)

NSF Panel Member (Partnerships in International Research and Education (2007)

NSF Panel Member (East Asian and Pacific Island Summer Internship, 2008)

NSF Panel Member (Ecology, Population Biology, 2003, 2006)

NSF Panel Member (NSF Doctoral Dissertation Improvement Grant, 2002)

NSF Ad hoc reviewer (1993-present)

EPA Panel Member (Terrestrial Systems, 2005)

EPA Panel Member (Biopollution, 2000)

EPA Panel member (STAR Graduate Fellowship, 2004, 2005)

Association of Public and Land-grant Universities, Council on Research (APLU CoR), Executive Committee member (2018-2020)

Association of Public and Land-grant Universities, Council on Research (APLU CoR), Sexual Harassment in Academia, Committee member (2019-2020)

APLU Highly Integrative Basic and Responsive (HIBAR) Research Association, board member

Ecological Society of America, Student awards judge (2006)

Southwestern Association of Naturalists, Session Chair (1997)

Botanical Society of America, Student paper awards judge

Ecological Society of America, Student paper awards judge (2000, 2005, 2007)

Sigma Xi, University of Arkansas, Membership committee

**Reviewer for:**

Ecological Society of America (book review)

McGraw-Hill Publishers (textbook review)

Prentice Hall (textbook review)

Yale University Press (book review)

Wm. C. Brown (textbook review)

**Journal Reviews (>50 reviews)**

American Journal of Botany

American Midland Naturalist

American Naturalist

Biotropica

Caribbean Journal of Science

Ecography

Ecology

Ecological Applications

Ecological Entomology

Evolution

Functional Ecology

Genetica

Insectes Sociaux

Journal of Chemical Ecology Journal of Insect Science

Journal of the Torrey Botanical Club

Journal of Tropical Ecology

Journal of Tropical Forest Science

New Phytologist

Oecologia

Public Library of Science (PLOS) ONE

Proceedings of the Royal Society of London

Weed Science

**Additional Reviews**

Environmental Protection Agency (manuscript clearance)

Organization for Tropical Studies (30 student award nominations)

AAAS L'Oreal Fellowships for Women in Science (2007-2011, 50 proposals)

Danish Ministry of Foreign Affairs

National Science Foundation (>100 proposals)

USDA Ad hoc reviewer (Biotechnology Risk Assessment Research Program) USDA Ad hoc reviewer (Small Business Innovation Research)

**Community Service**

American Red Cross, Phoenix, Arizona (volunteer, donor) (2018-present)

St. Mary’s Food Bank, Phoenix, Arizona (volunteer, donor) (2020-present)

**Select media coverage 6-14 August 2010** in response to our discovery of genetically modified canola growing outside of cultivation in the U.S. Reported at the annual meeting of the Ecological Society of America, Pittsburgh, PA. of more than 100 articles globally.

**Nature News:** N. Gilbert, 6 August 2010 <http://www.nature.com/news/2010/100806/full/news.2010.393.html>**BBC BBC News:** R Black, 6 August 2010 [http://www.bbc.co.uk/news/scienceenvironment-10859264](http://www.bbc.co.uk/news/science-environment-10859264)